THE REAL ESTATE ANALYSTS

The Real Estate ANALYST

OCTOBER 1944

Roy Wenzlick
Editor

A concise easily digested periodic analysis based upon scientific research in real estate fundamentals and trends....Constantly measuring and reporting the basic economic factors responsible for changes in trends and values.....Current Studies.... Surveys....Forecasts

Copyright 1944 - by ROY WENZLICK & CO. - Saint Louis

REAL ESTATE ECONOMISTS, APPRAISERS AND COUNSELORS

VOLUME XIII

THE OUTLOOK FOR FARM LANDS

FARM LANDS have increased in value by more than one-third since the war. This increase in value has been due almost entirely to the increased demand for farm products which the war brought, and to the increased prices which this demand produced for farm products.

The Bureau of Agricultural Economics of the United States Department of Agriculture has just published a very informative paper-bound book of 191 pages on the impact of the war on the financial structure of agriculture. It can be secured free by writing to the United States Department of Agriculture, BAE Division, Washington 25, D. C.

This study shows beyond any question that farmers throughout the United States are in better financial condition than they have ever been before. If either demand deposits or time deposits of banks in strictly farming districts are compared with all deposits in the United States, it is seen that since 1933 the farmers have faired far better and their deposits have increased by a far greater percentage than have all deposits. It is also found that farmers' liabilities are unusually low, totaling for the entire country about nine billion dollars. Of this, slightly more than five and a half billion consist of mortgage obligations, two and a third billion of obligations to institutional lenders and slightly over one billion of other miscellaneous obligations. On the asset side of the ledger we have a total of eighty-three billion dollars at the beginning of this year, and this has probably increased during the year. During the past four years the equities of all owners of farm land and of all tenant farmers have increased nearly thirty billion dollars, whereas the holdings of mortgagees and other lenders to agriculture were reduced half a billion or more.

During the first World War inflation of farm land mortgage debt increased at the same time that farm lands were increasing. Many farmers mortgaged their farms to buy additional acreage on slim equities. Apparently this is not happening at the present time and as the peak of demand has probably passed for the next few years, the chance of a farm boom going to the same extremes as the farm boom in the early twenties seems lessened.

Another thing which should be kept in mind in regard to the recent rise in farm values is that land prices started to rise as a result of the war from a lower level this time than they did in the first World War period. At least some of the rise so far has been in the nature of a recovery. The rise has also been tempered by the fact that when it started, institutional hold-

(continued on page 290)

THE LUMBER SITUATION

LUMBER production for the first half of 1944 amounted to sixteen and one-third billion board feet. This is 1% below the first six months of 1943 and 9% below the first half of 1942. Lumber stocks at mills and in yards on July 1 of this year were estimated at six and one-third billion board feet, compared with more than eighteen billion board feet at the middle of 1941.

The chart on the page opposite shows the changes which have taken place in the lumber situation during the past four and one-half years. It is computed from the figures of the Lumber and Lumber Products Division of the Forest Products Bureau of the War Production Board. This chart shows quite strikingly the pronounced drop in total stocks from eighteen billion in the middle of 1941 to six and one-third billion by the middle of 1944.

It will be noticed that total consumption and exports have exceeded total production and imports most of the time since the middle of 1940, which has resulted in the dwindling stock pile in the United States.

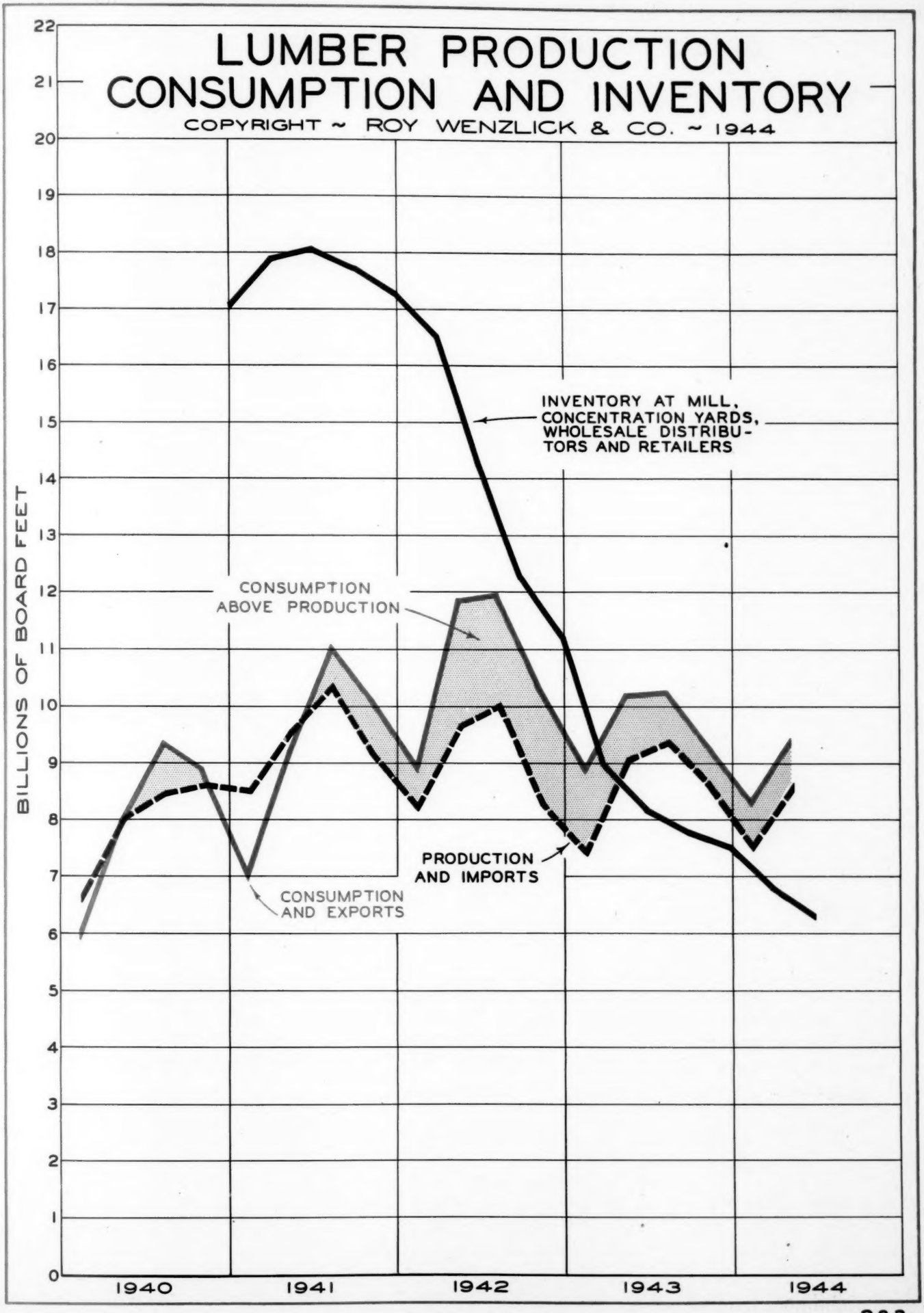
Since the end of 1941 the stocks of lumber in the hands of retail distributors have fallen from approximately seven billion board feet to slightly under two billion board feet. Since the first part of 1941 the stocks at mills and in concentration yards have fallen from more than ten billion board feet to approximately four billion board feet.

The consumption of lumber at the present time is very heavy for boxes, crating and dunnage, exceeding in board feet all lumber used in civilian construction and for direct military purposes. If this is compared with the third quarter figures for 1940, it will be found that lumber for boxes, crating and dunnage was less than one-fifth of the amount used for civilian construction at that time.

During all of September there were less than ten thousand nonfarm dwelling units built in the entire United States. This very restricted volume of residential construction has reduced consumption of lumber to the point where consumption exceeds production by only about six hundred million board feet per quarter. Even this rate of excess consumption is increasing the critical situation, as a large part of the lumber now in stock piles, particularly of retail distributors, is in shapes and sizes not in heavy demand.

There is no chance of the lumber situation bettering rapidly, as manpower shortages in the woods and in the mills have been particularly acute. In July the Lumber and Timber Basic Products Industries had 46,000 fewer workers than they had a year ago, and 121,000 fewer than in July 1942, according to the figures of the Bureau of Labor Statistics. As a result of tremendous military requirements, a very severe shortage of truck tires of sizes 8.25 and larger exists for all types of civilian use. About 80% of logs in the industry as a whole are hauled to the mill by truck. During the first half of 1944 the lumber industry received only 56% of its minimum truck requirements.

It seems to us that even though the war should end suddenly in Europe, improvement in the lumber situation will come so gradually that it will be a limiting factor on new residential building during 1945 and even the early part of 1946. Even after unusual war demands for lumber decrease, it will take many months to build back normal stocks.


LUMBER PRODUCTION
CONSUMPTION AND INVENTORY
COPYRIGHT ~ ROY WENZLICK & CO. ~ 1944
BILLIONS OF BOARD FEET
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
INVENTORY AT MILL, CONCENTRATION YARDS, WHOLESALE DISTRIBUTORS AND RETAILERS
CONSUMPTION ABOVE PRODUCTION
PRODUCTION AND IMPORTS
CONSUMPTION AND EXPORTS
1940
1941
1942
1943
1944

THE EFFECT OF CHANGING CONSTRUCTION COSTS ON THE VALUES OF OLDER BUILDINGS

DURING the past twenty-five years construction costs have varied greatly, and this has had a tremendous effect on the values of buildings already built. The standard six-room frame house on which we refigure costs each month on a 50-foot lot in a suitable neighborhood reached a peak of $9590 in 1924. This was a very large increase in comparison with the figures of 1915, when the house and lot could be duplicated for $5340. From 1924 until 1933 costs were dropping. By that time the building and lot could be duplicated for $6390. By 1937 it cost $8040 and by the following year it dropped to $7520. Then it started rising again, until today the cost is $9120. The reason the price given here varies from the figures given in our regular reports on the cost of the standard six-room frame residence is that these figures include the ground.

Why do changes in replacement cost affect the values of buildings already built? The reason is quite apparent if construction costs are dropping as they did from 1924 to 1933. Because a new building can be built for less than the old building cost, the value of the old building will naturally decline below its replacement cost new, as the new building is always more desirable than the old building. If replacement costs rise as they have during the more recent period, new building lags until the shortage of units has forced the values of existing properties to the point where new buildings can be built in competition.

Many appraisers in appraising residential buildings assume a life of 50 years, or a depreciation of 2% per year, and while the physical life of a well constructed and well maintained residential building is probably many times this amount, on the average the economic value of the property seems to confirm this 50-year period used so frequently.

In order to test these theories and also in order to clarify the effect of construction cost changes on older properties, we have charted the replacement cost of our standard six-room frame residence on a 50-foot lot from 1913 to the present on pages 286 to 289 of this report.

On this chart, the top blue line shows the total replacement cost of house and lot. The red line toward the bottom of the chart shows the cost of the 50-foot lot only, suitable for building this house. It will be noticed that we do not expect the value of this lot to rise by a very large percentage in the post-war period, although in the boom of the twenties following the first World War there was a sizeable increase. This is due, of course, to the fact that since the twenties good roads and better methods of rapid transportation have made so much land readily available that none of it could have very much of a scarcity value for residential use.

The red dotted line on this chart starting in 1913 and gradually sloping to the lower right-hand corner of the chart shows what the value of the house and lot would be had the building been constructed in 1913 and had the building been depreciated at 2% per year for the next 50 years. At the end of the 50-year period under this assumption the economic value of the house and lot would be approximately the value of the ground.

This line is placed on the chart merely to show that the assumption of a

2% deduction per year from original cost is incorrect. The fundamental fallacy is, of course, deducting the accrued depreciation from the original cost. This method would be justified only in a period when construction costs remain constant. Accrued depreciation should be deducted not from the original cost but from the current replacement cost. On that basis, the worth of a building built in 1913 would have varied roughly in accordance with the lowest line of the band on the long chart. This line deducts 2% from the replacement cost in 1914, 4% from the replacement cost in 1915, 6% from the replacement cost in 1916, 20% from the replacement cost in 1923, 40% from the replacement cost in 1933, and 60% from the replacement cost in 1943. Checking against actual properties on the market, we believe that this line represents in a rough fashion what has happened to properties of this type built about that time. Market prices will vary slightly from the worth line, being below it during periods when real estate activity is low and above it in periods when real estate activity is high.

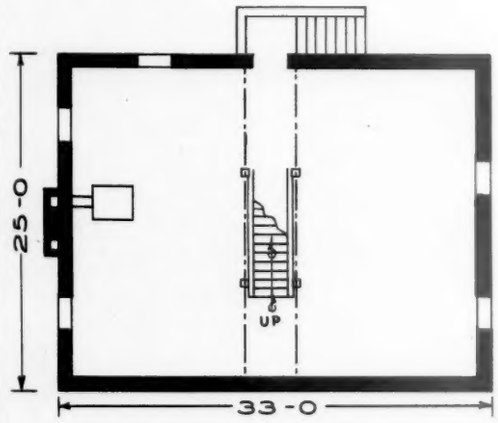
While the bottom line in the band on the chart represents the theoretical fluctuations in worth from 1913 to the present, the intermediate lines show the same thing for properties built in the years shown by the figure to the right of the line. In order to make it easier to follow this complicated system of lines across the chart, all years ending in five are printed in red. It is possible from a study of this chart to get some idea of the approximate increase or decrease in the worth of a property of any given age as construction costs increase or decrease. If a property built in 1932 is taken as an example, it will be found that in spite of the fact that this property is now 12 years old with a theoretical deduction of 24% for accrued depreciation, its worth has increased from $6280 to $7260. A building built in 1940 costing at that time $7900, in spite of the fact that theoretically 8% should be deducted for depreciation, now figures $8500. The change in real estate activity in most communities would bring the actual selling price higher than this.

The greater the age of a building, the less is its worth increased by an increase in construction costs. The worth of an extremely old building will not increase at all with an increase in construction costs, although the market price will increase, as in a boom market the public buys without discrimination and the general buoyancy of the market carries up the worthless property with the good. However, when the market turns down, first the excess price obtainable from the degree of market activity disappears and next the drop in replacement costs which generally accompanies a declining market decreases values still further. When replacement costs drop, the worth of the property drops faster than replacement costs, as under these conditions with accrued depreciation being deducted from replacement cost, the drop is the sum of the drop in price and the deduction for depreciation. The rapidity with which new properties dropped, say from 1929 to 1932, shows what can happen in a falling market.

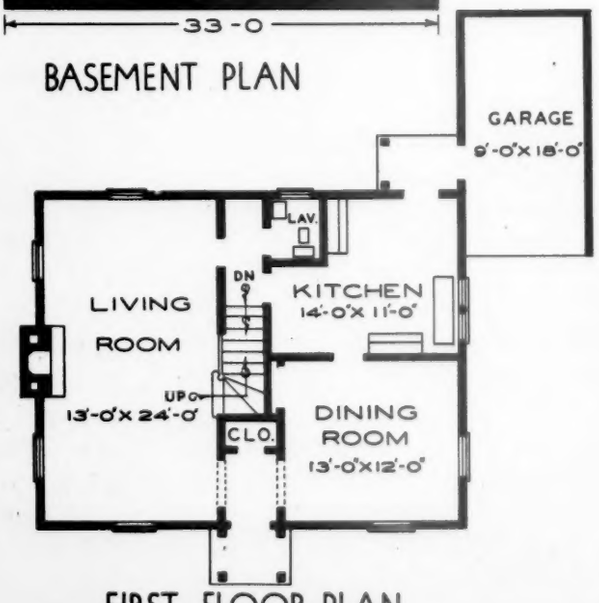
In our opinion, replacement costs on residential buildings of this type will advance further, then will soften slightly and will probably stabilize for a short time. At some time in the post-war period, however, a peak of replacement costs will be reached and when this point is approached the lender must beware, as even conservative loans may be jeopardized by drops in replacement cost due to new materials and a buyer's market for these materials, and due to the inactivity which will then develop in the real estate field. Many loans which are considered gilt-edged will get into difficulties, and foreclosures will again start an upward trend.

STANDARD SIX ROOM FRAME RESIDENCE BUILT IN ST. LOUIS

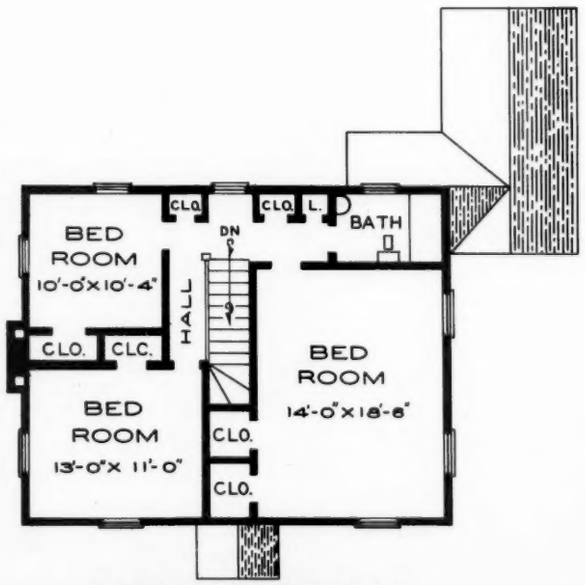
25,376 CUBIC FEET



BASEMENT PLAN

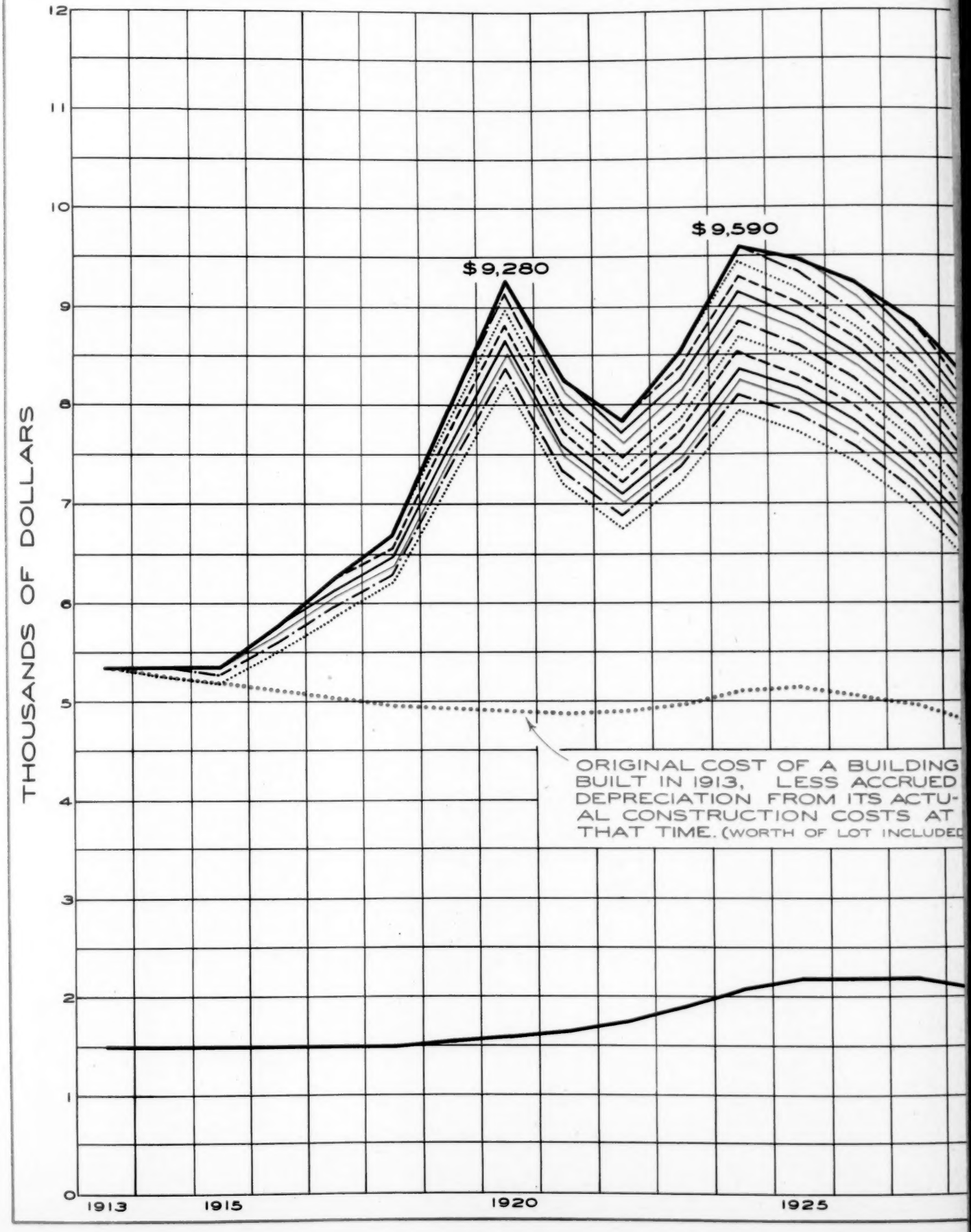


FIRST FLOOR PLAN



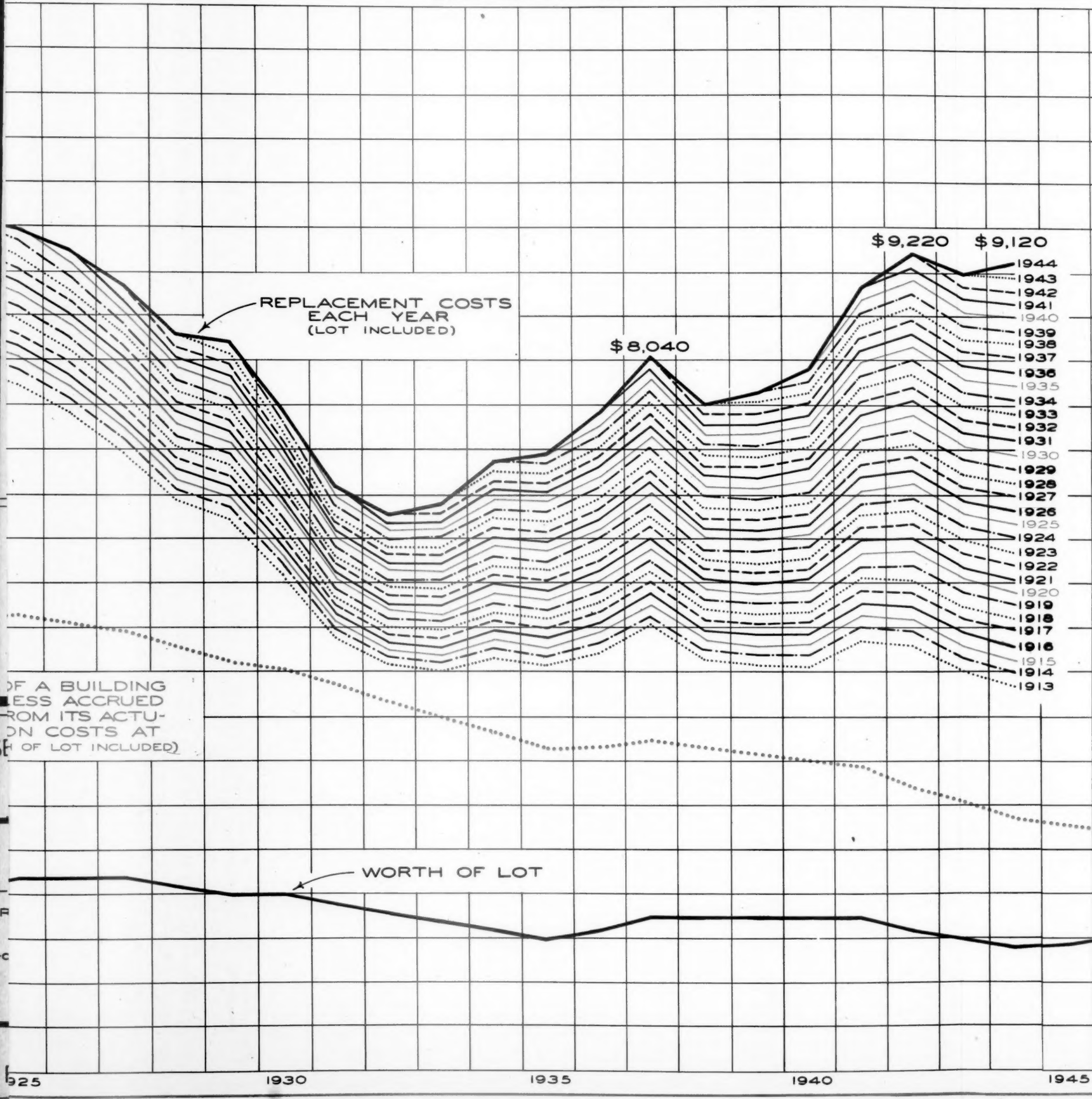
SECOND FLOOR PLAN

THE EFFECT OF CHANG

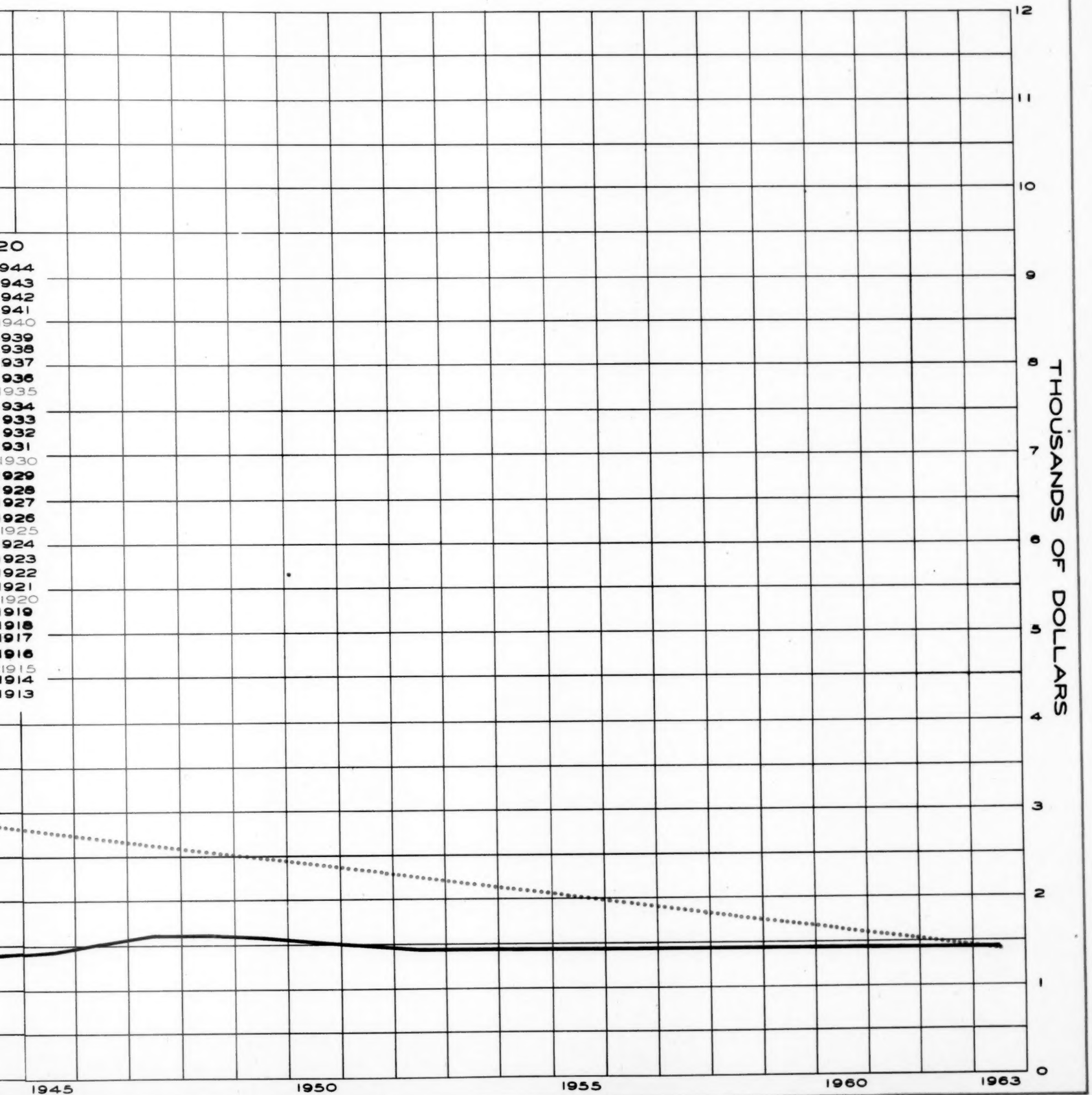


CHANGING CONSTRUCTION COSTS ON THE V

COPYRIGHT ~ ROY WENZLICK & CO. ~ 1944



E VALUES OF OLDER BUILDINGS



(continued from page 281)

ings of farm lands were quite large and as prices have shown a tendency to rise, these institutional holdings have been thrown on the market, increasing the supply by a sufficient percentage to prevent the rapid rises experienced twenty-five years ago.

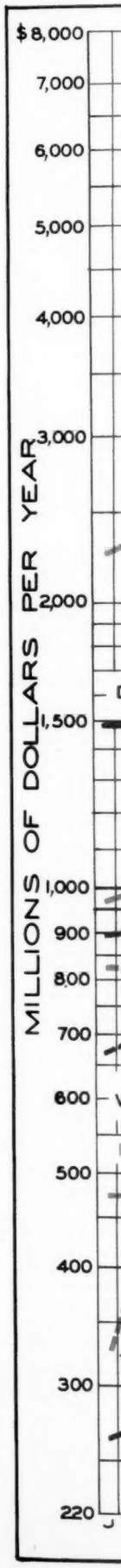
The chart opposite breaks down the farm income situation by type of products in order to give a better idea of the income rise for farm lands used for various purposes.

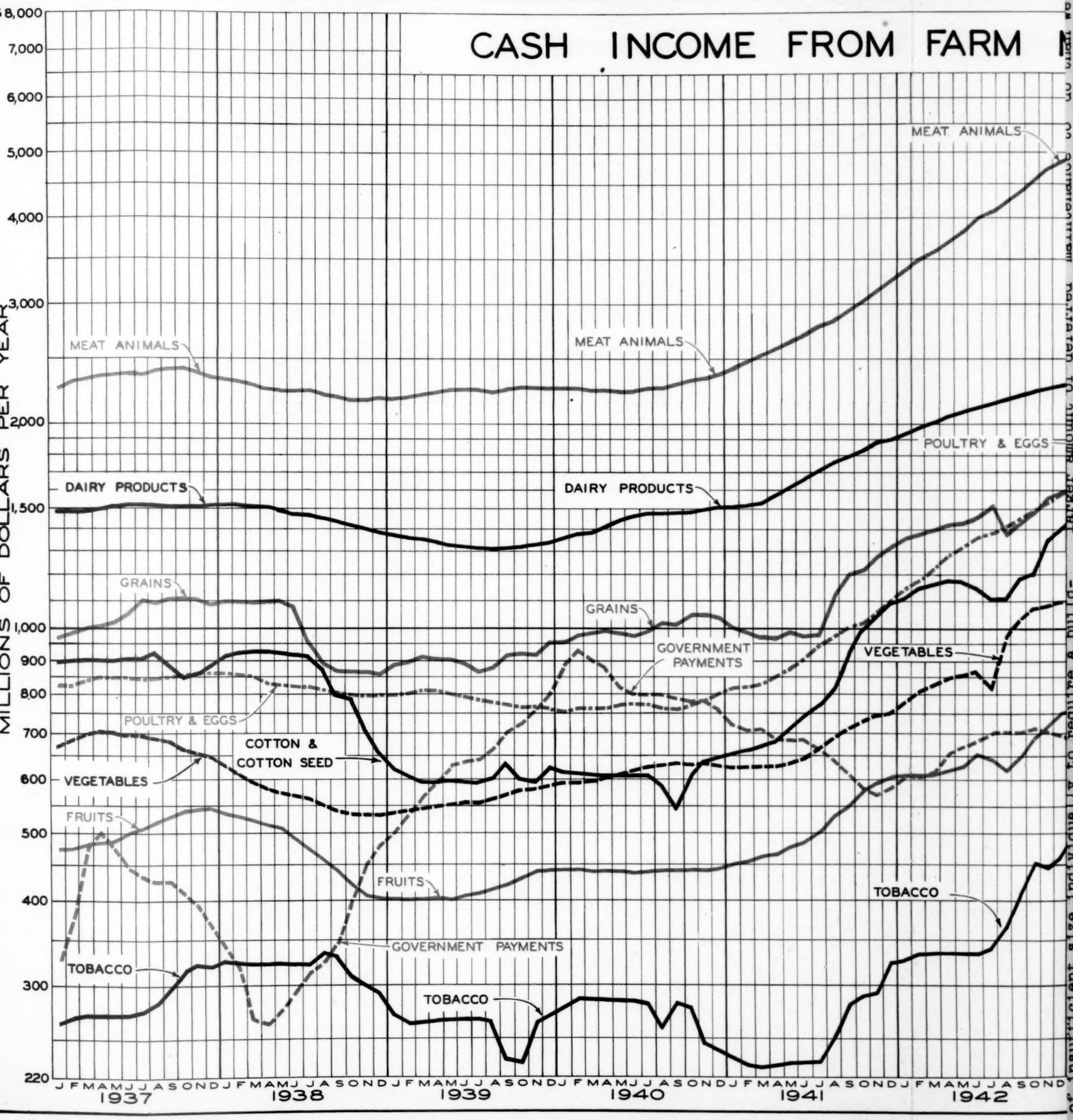
These figures are charted on a ratio scale, a method of charting used quite frequently in our reports. It will be noticed on these charts that equal amounts in dollars are indicated by progressively smaller distances on the chart. The effect of this method of charting is that the slope of any line on the chart will indicate the rate of percentage increase in the figures and this will be true regardless of whether the line being charted is in the lower part or the upper part of the chart. This can best be demonstrated by several illustrations. From the beginning of July 1938 until the beginning of May 1939 government payments increased from a rate of three hundred million to six hundred million dollars per year, as is shown by the dashed line on the chart. This is an increase of 100%, as the figures doubled during the period. Cash income from the sale of meat animals from March 1941 to February 1943 increased from two billion, five hundred million dollars per year to five billion dollars per year. This is also an increase of 100%, and if the distance between three hundred million and six hundred million is measured on the grid of this chart, it will be found to agree exactly with the distance from two billion, five hundred million to five billion, and this same measurement in inches will be found to hold true at any place on the scale. It will be identical with the distance from four hundred million to eight hundred million, from five hundred million to one billion, from one billion to two billion, etc.

The doubling of government payments as used in this illustration occurred in a period of ten months, while the doubling of the cash income from the sale of meat animals occurred in twenty-three months.

On a ratio chart any lines which move in a parallel direction are changing at the same rate. Since the line showing the cash income from the sale of meat animals has been rising faster since February 1941 than cash income from dairy products, it would indicate that the income from meat animals has been increasing at a faster rate than the income from dairy products. If this general principle of ratio charts is understood, it will convey considerably more information to the informed reader than it will to the person who merely considers a chart a chart. Ratio charts are sometimes called semi-logarithmic charts, or logarithmic charts for short.

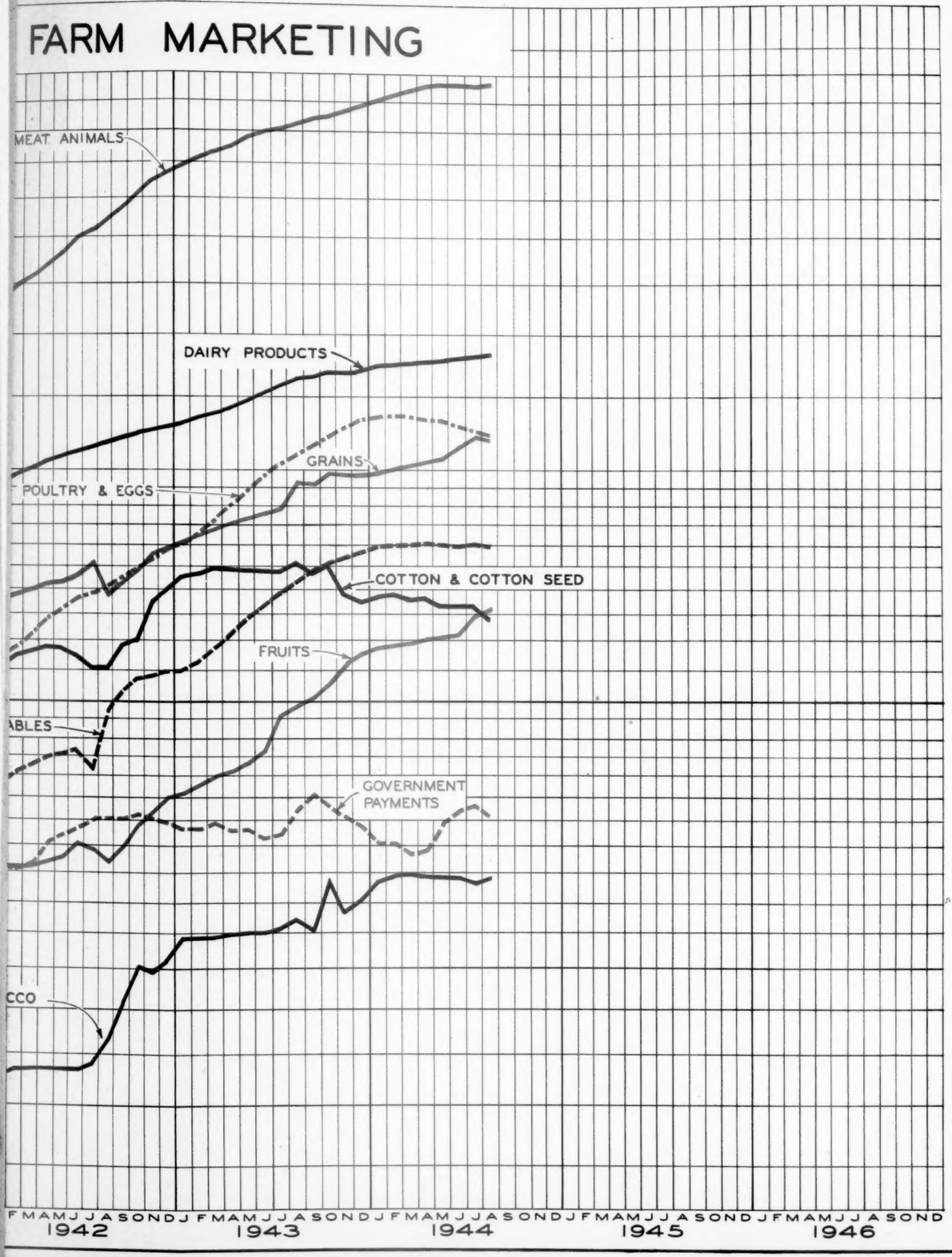
Since the beginning of 1941 we will find by measuring with a slip of paper that the income from the sale of fruits has increased by a larger percentage than has any other item on the chart. This would lead us to believe that good farm lands suitable for the raising of fruits have also had a very large rise. As fruits are to some extent a luxury item we would expect, however, that a drop in earnings on the part of labor would bring a sharper drop to income from the sale of fruits than would be the case in some of the other items grown on the farm. This would also bring a drop in the value of farm lands suitable for fruit production, as the value of farm lands depends primarily on the net income which can be derived from their use.

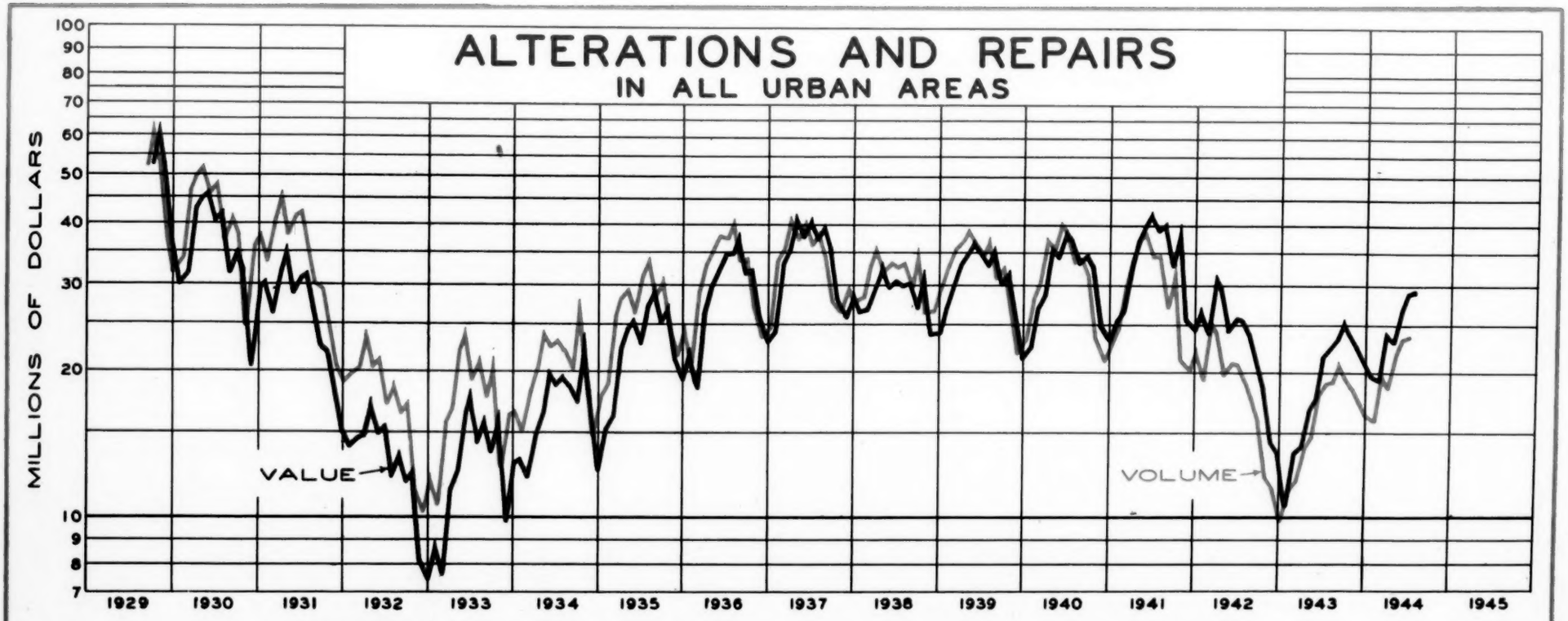




of insufficient size individually to require a build-
ing permit. For this reason, the dollar figures as
had after the big depression of the thirties. The
larger part of work of this sort consists of labor,

FARM MARKETING


MEAT ANIMALS
DAIRY PRODUCTS
GRAINS
POULTRY & EGGS
COTTON & COTTON SEED
FRUITS
ABLES
GOVERNMENT PAYMENTS
CCO
F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1942
1943
1944
1945
1946



DEFERRED MAINTENANCE IN THE POST-WAR PERIOD

THE chart above shows the dollar value and the estimated physical volume of alterations and repairs from September 1929 to the present. The red line showing volume is the value line corrected for changing construction costs.

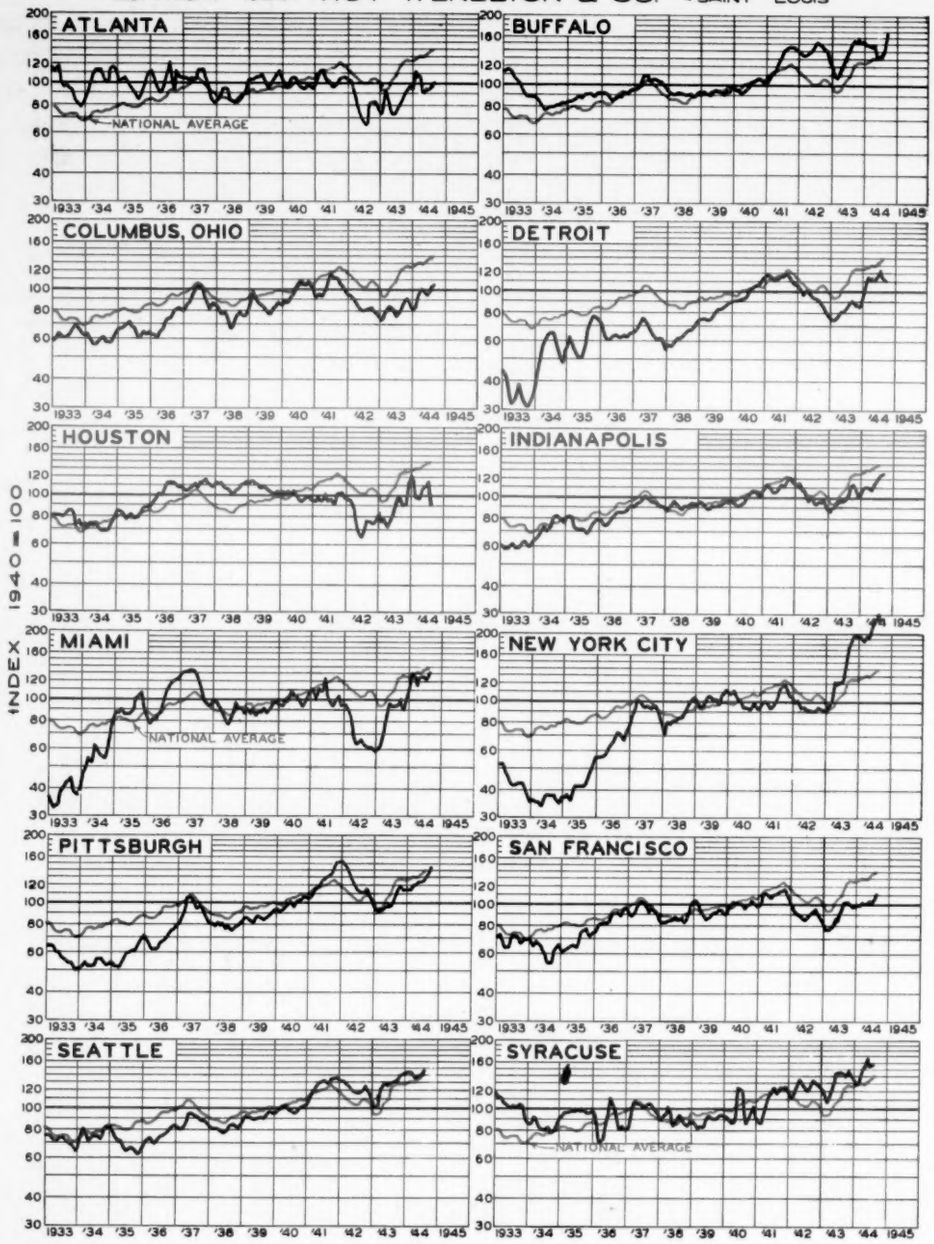
The only basis for a chart of this sort is a compilation of building permits, with the difficulty that a large volume of alterations and repairs are of insufficient size individually to require a building permit. For this reason, the dollar figures as shown by the chart are much too low. The percentage fluctuations are probably approximately correct.

It will be noticed that in 1943 the volume of alterations and repairs fell below the level of the bottom of the depression. Since 1943 there has been some improvement, due primarily to conversions of single-family residences in war areas to multifamily units, and to other alterations and repairs which were so essential that they could secure the necessary priorities and permissions.

As we enter the post-war period we will have a larger amount of deferred maintenance to do than we had after the big depression of the thirties. The larger part of work of this sort consists of labor, and labor will be plentiful before materials have become abundant. During the next three years there should be a very large volume of this business.

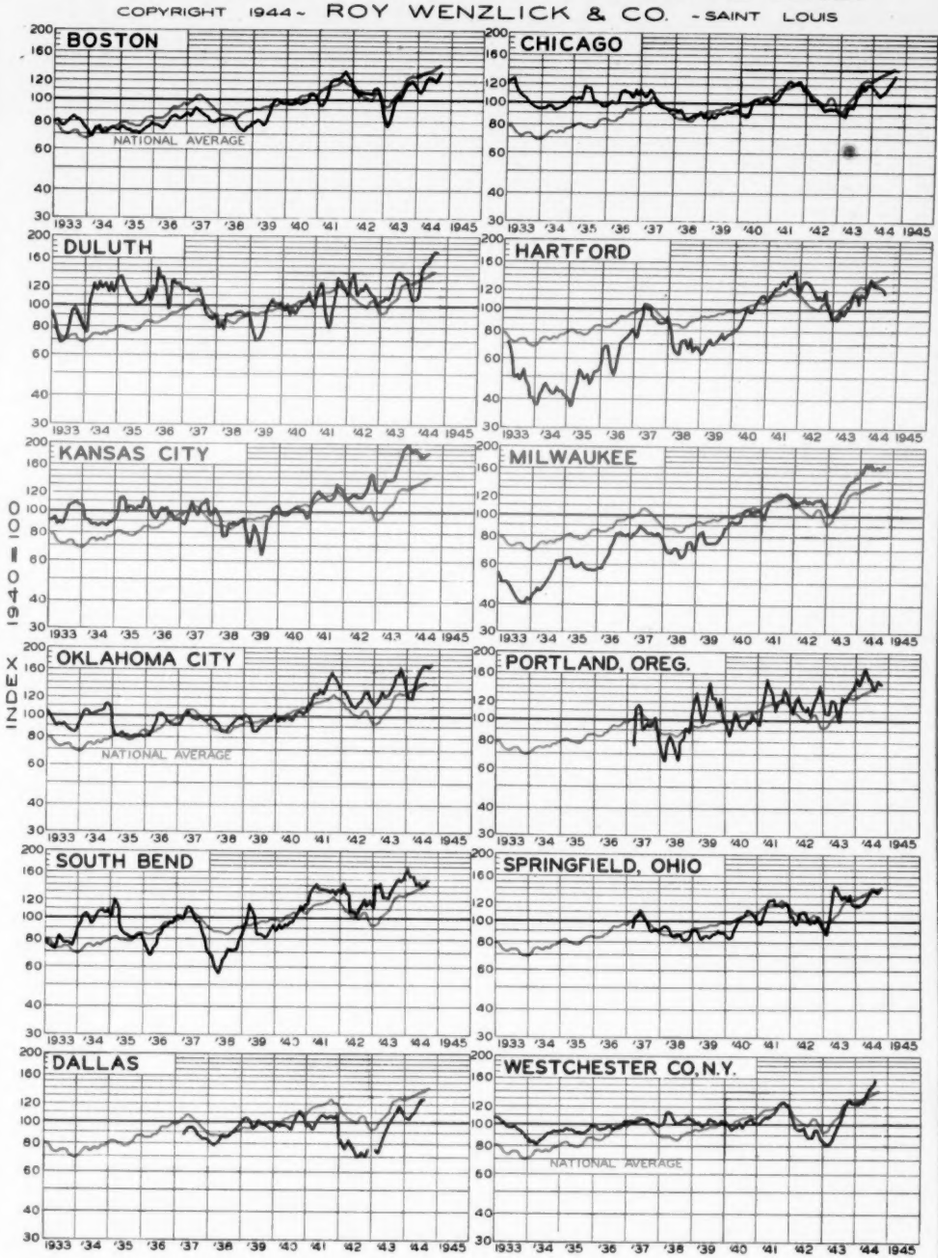
REAL ESTATE TRANSFERS IN PRINCIPAL CITIES

COPYRIGHT 1944~ ROY WENZLICK & CO. ~SAINT LOUIS

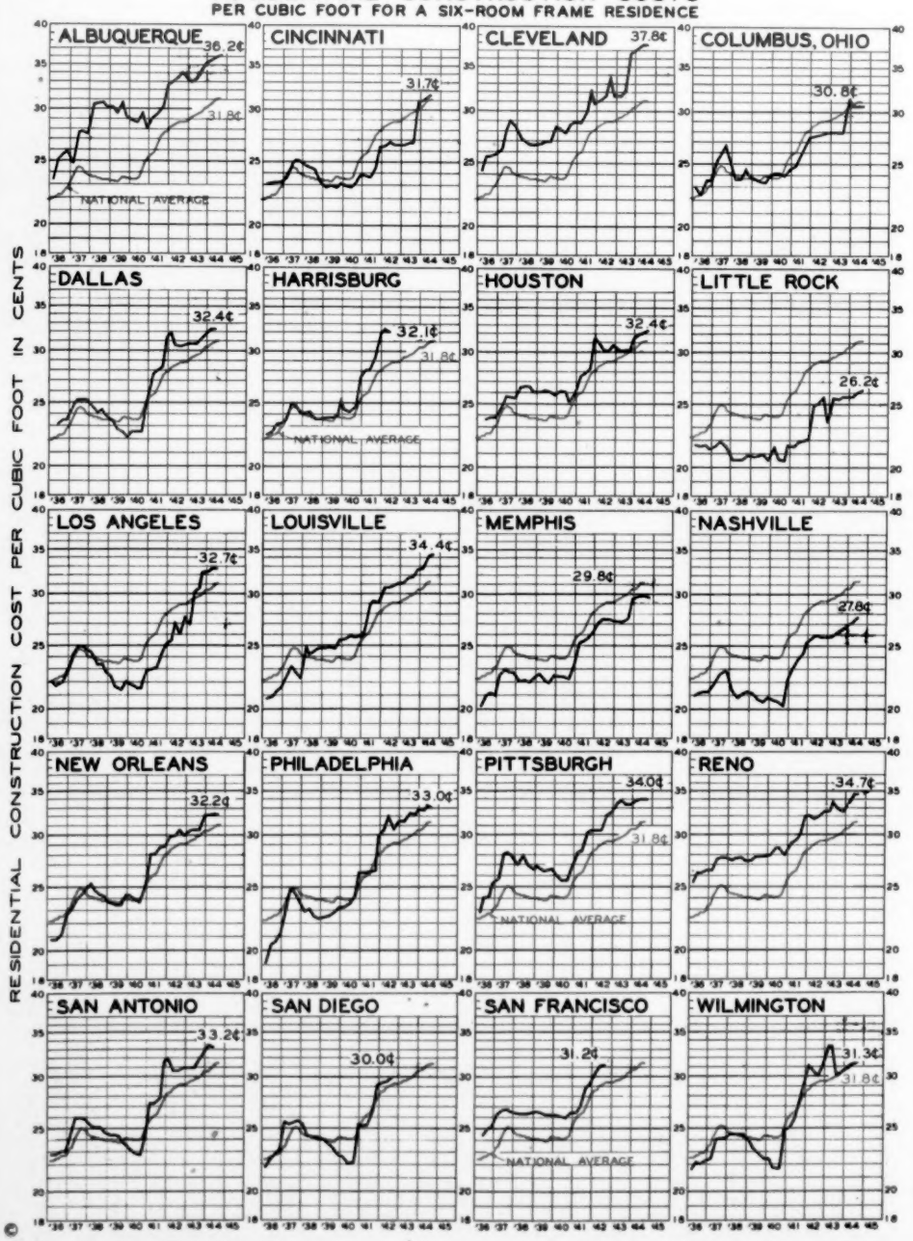


REAL ESTATE TRANSFERS IN PRINCIPAL CITIES

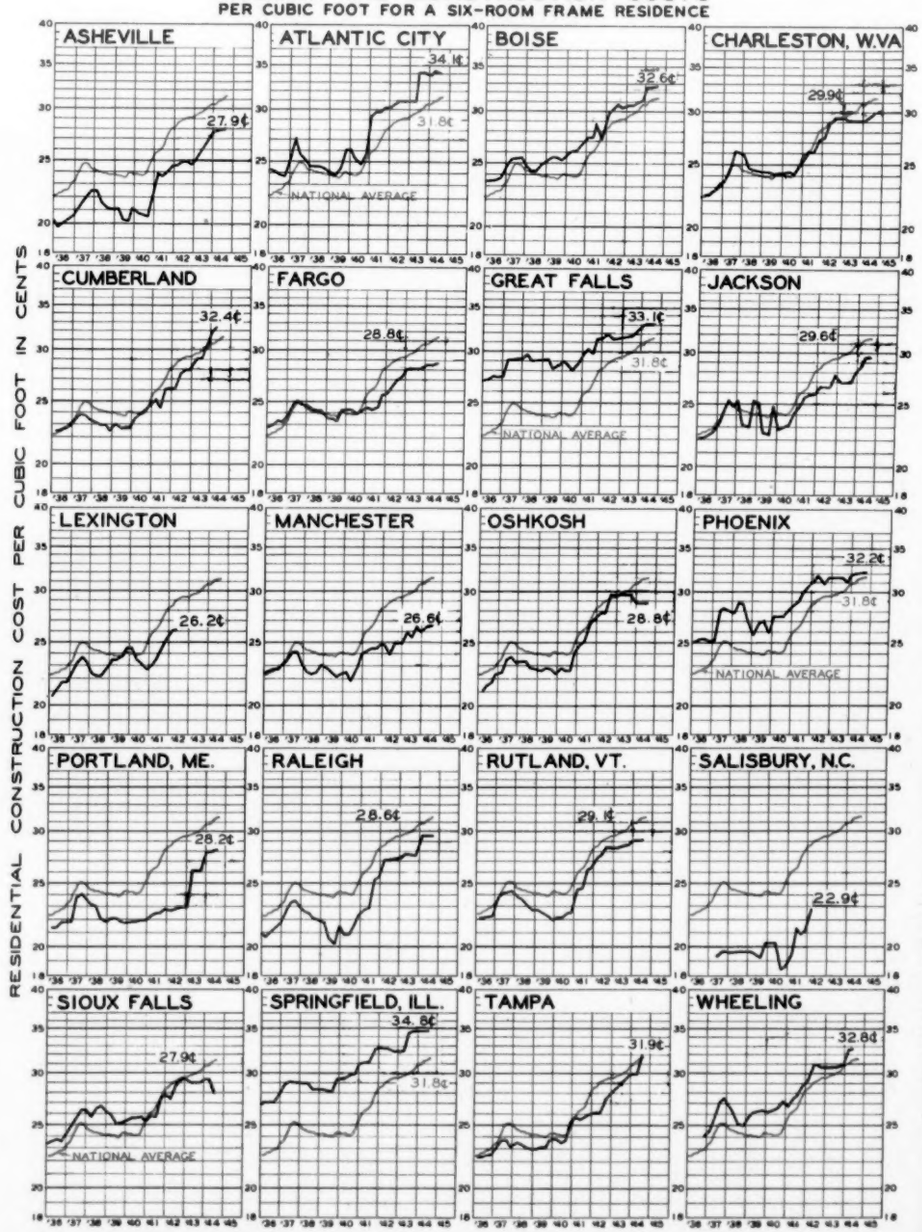
COPYRIGHT 1944~ ROY WENZLICK & CO. ~SAINT LOUIS



RESIDENTIAL CONSTRUCTION COSTS
PER CUBIC FOOT FOR A SIX-ROOM FRAME RESIDENCE



RESIDENTIAL CONSTRUCTION COSTS
PER CUBIC FOOT FOR A SIX-ROOM FRAME RESIDENCE



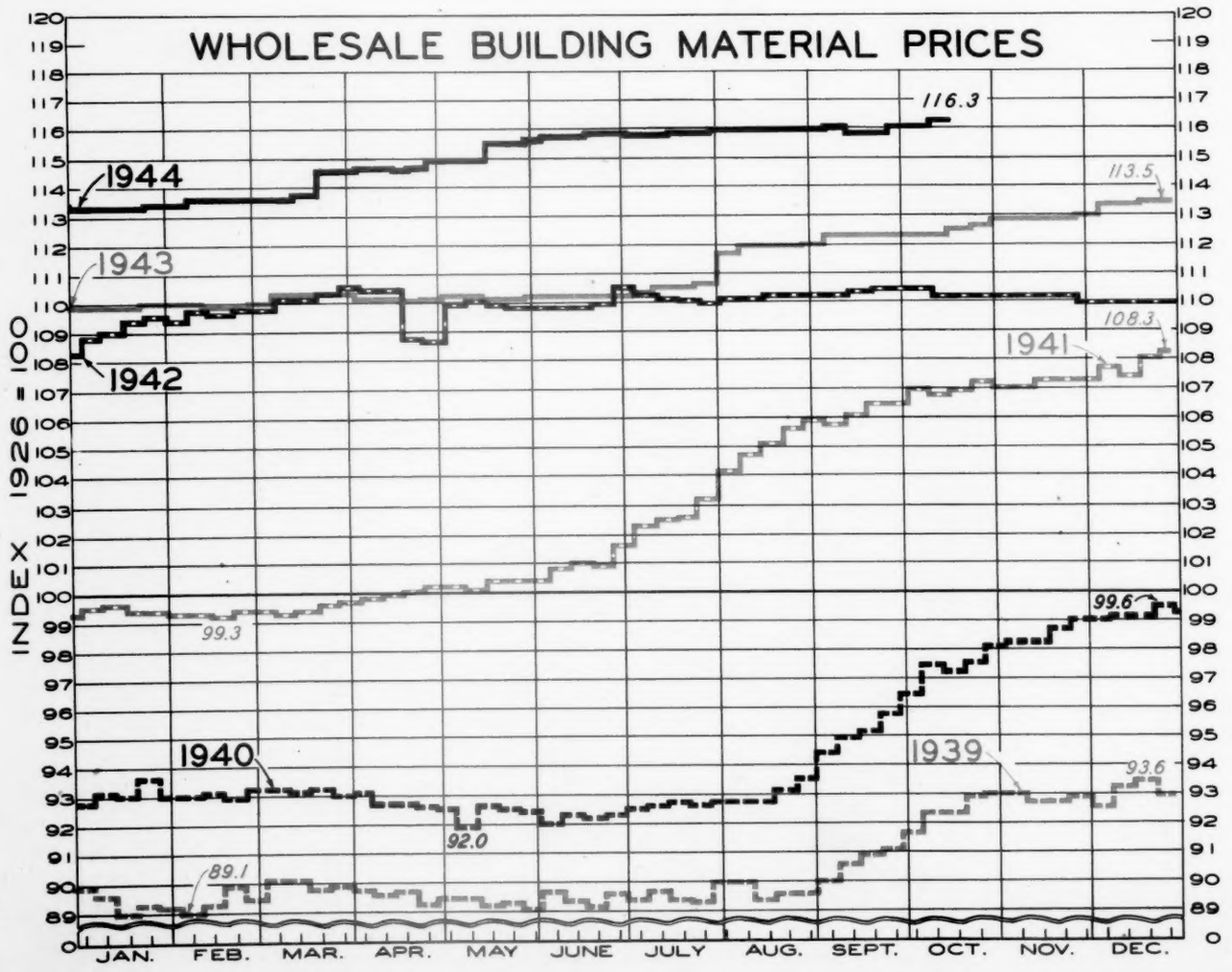
©

DWELLING UNITS CONSTRUCTED IN 48 STATES

THE number of new family accommodations built in all nonfarm communities of the 48 states and the District of Columbia is shown in the table below. Cumulative totals and twelve month moving totals are shown in blue for 1942 and 1944 and in red for 1941 and 1943.

THOUSANDS OF UNITS

	MONTHLY				CUMULATIVE				12 MONTH MOVING TOTAL			
	1941	1942	1943	1944	1941	1942	1943	1944	1941	1942	1943	1944
JANUARY	41.2	34.5	45.0	16.7	41.2	34.5	45.0	16.7	617.7	708.5	507.1	322.6
FEBRUARY	43.7	51.3	40.1	14.1	84.9	85.8	85.1	30.8	624.5	716.1	495.9	296.6
MARCH	60.2	52.7	33.1	18.0	145.1	138.5	118.2	48.8	638.7	708.6	476.3	281.5
APRIL	75.2	59.7	26.7	13.7	220.3	198.2	144.9	62.5	651.0	693.1	443.3	268.5
MAY	70.7	60.6	33.6	16.4	291.0	258.8	178.5	78.9	664.7	683.0	416.3	251.3
JUNE	77.2	46.3	21.7	18.2	368.2	305.1	200.2	97.1	697.9	652.1	391.7	247.8
JULY	74.6	26.7	24.2	13.5	442.8	331.8	224.4	110.6	715.0	604.2	389.2	237.1
AUGUST	69.8	27.5	27.9	12.7	512.6	359.3	252.3	123.3	729.1	561.9	389.6	221.9
SEPTEMBER	67.0	40.4	24.2	9.9	579.6	399.7	276.5	133.2	737.7	535.3	373.4	207.6
OCTOBER	56.2	32.2	28.6		635.8	431.9	305.1		727.7	511.3	369.8	
NOVEMBER	46.6	30.4	25.8		682.4	462.3	330.9		729.4	495.1	365.2	
DECEMBER	32.8	34.3	20.0		715.2	496.6	350.9		715.2	496.6	350.9	



THE REAL ESTATE ANALYSTS

VOLUME XIII

OCTOBER
1944

As I see

THE PROBABLE HEIGHT OF THE PRESENT REAL ESTATE BOOM AND ITS DURATION

ACCORDING to our long activity chart as printed this month in the Executive Digest, real estate activity in September 1944 reached a level 43.7% above the long-term computed normal. This is higher than the highest point reached during the big boom of the twenties and is higher than any month since 1906.

A level this high immediately suggests the subject of this bulletin.

Before discussing the probable length of the boom, let us look more critically at the index of real estate activity as we have charted it in our bulletin. Every chart which attempts to show periods of booms and depressions must compute a "normal," above and below which the fluctuations occur. For many types of economic data a normal will divide the data into active and inactive periods, with a relatively short and generally rather irregular cycle. Real estate has been distinguished in the past by the regularity of its fluctuations and by the extreme length of the period between the tops of booms and the bottoms of depressions. Over a long period a complete cycle, including the active boom period and the inactive depression period, has averaged slightly more than 18 years.

How can a normal for a long series of economic data be computed, and what is done to the original figures in the process?

Figures on most of the principal metropolitan areas of the United States are secured by our office each month and these figures undergo two initial adjustments. In the first place, voluntary transfers of real estate are related to the number of families in the area. Were this not done, the line showing real estate activity would constantly trend upward as the population of the United States increased. Families are used rather than individuals, as the larger percentage of voluntary transfers of real estate numerically is on homes, and a home is occupied by a family unit. Due to the change in the number of persons in a family, 1000 people today constitute 69% more families than they did in 1850. Were population used as our correction in place of families, our line would be under-corrected and would still show a tendency to move up. It is entirely probable, however, that the family correction overcorrects the figures, as we have found a tendency for our line to gradually sink.

There is a strong seasonal movement in all real estate figures - that is,

Copyright 1944 - by ROY WENZLICK & CO. - Saint Louis

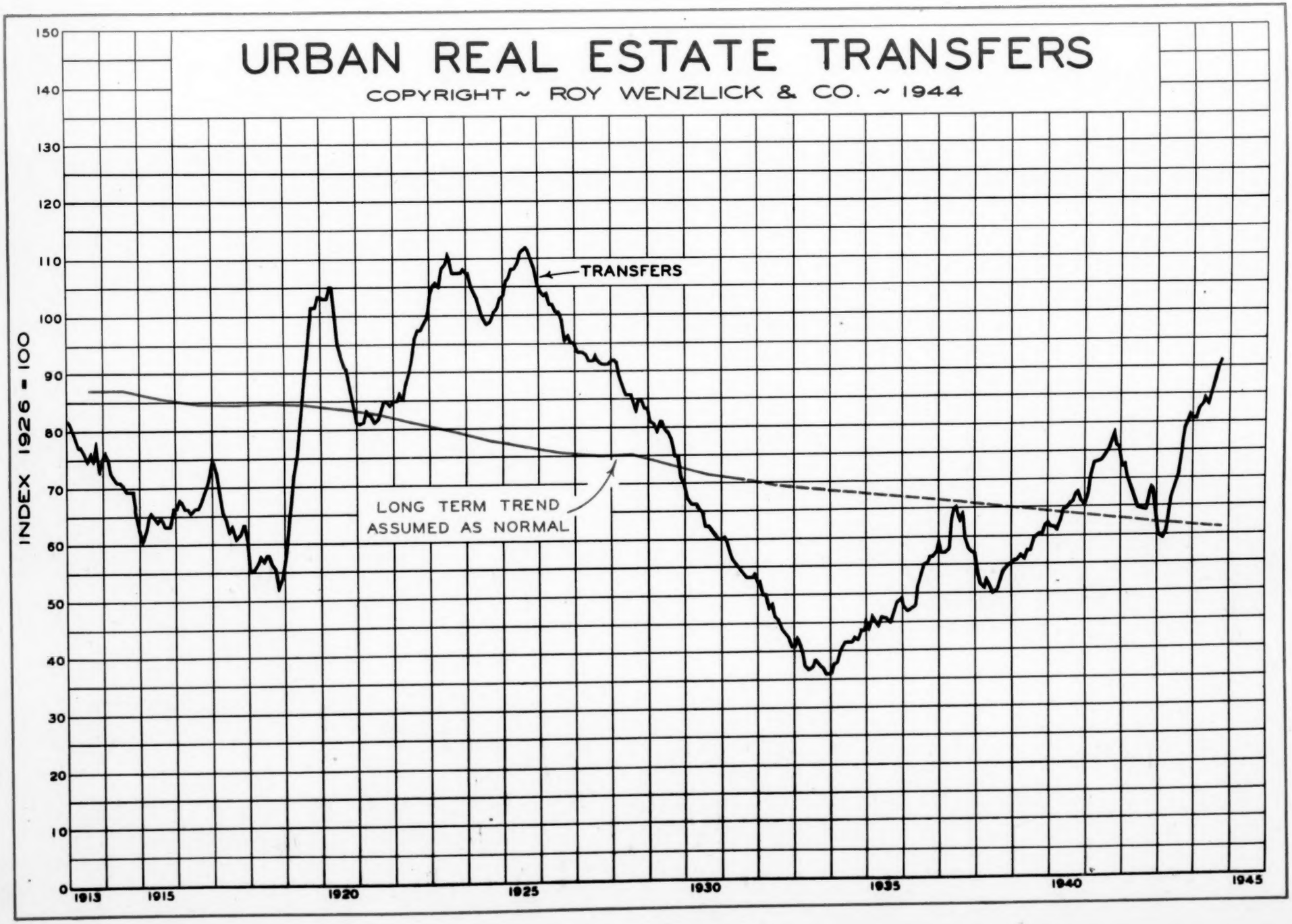
certain months show a definite tendency to be active and other months to be inactive. This definite seasonal pattern which tends to repeat each year would, if they were charted without correction, have a tendency to conceal the actual improvement or retrogression of the figures. All figures are, therefore, adjusted mathematically for seasonal fluctuations. After adjustment, a normal year, provided that no increase or decrease developed, would appear as a horizontal line with all months appearing at the same height. No year, however, is entirely normal and even after correction for seasonal fluctuations, certain movements up and down remain in the charted data. A part of this movement is due to the fact that seasonal corrections cannot be made with 100% accuracy due to the irregularity of our calendar and to the fact that the number of working days in the same month of succeeding years may vary.

After figures have been corrected for families and for seasonal fluctuations, they appear as shown by the charted line on the page opposite.

What is normal? The best definition I know is that normal at any time is an average of the past and future. For this reason, it is relatively easy to compute exactly the normal for past cycles, as the future for definite points in the past is known and can be measured. It is relatively easy to compute the normal level of real estate activity for 1925, as we have the detailed measurements prior to that time and also we have now experienced 19 years of measured figures since then. It is impossible, however, to determine exactly the normal at the present time, as no one knows with sufficient detail the developments of the period ahead.

The impossibility of determining an exact normal at the present time can be illustrated by considering the subject of construction costs. Are they high at the present time or are they low? Clearly they are much higher than they have been during the period from 1933 to the present. They are even higher than they were at the peak during the boom of the twenties. That, however, does not prove that they are high at the present time, any more than the fact that construction costs had advanced from 1913 to 1918 by more than 35% proved that construction costs were high then. Looking back now, construction costs in 1918 were relatively low, but only because we can measure in detail the period that followed. If a fairly high degree of inflation should develop in the post-war period, we might find that present construction costs, although they are higher than they have been at any time in the past, are still relatively low.

The same thing applies to real estate activity. We can determine the normal during the period of the twenties, we can approximate it during the thirties and we can guess its relative position during the forties, with considerable chance, however, of missing its true position. We had assumed that the normal was dropping and this assumption was based on a long-term trend which showed a gradual lowering of real estate activity. This seemed quite reasonable, as our charts on various cities showing real estate activity over a long period of years, show that in older matured cities real estate activity in relationship to the number of families has gradually dwindled. In the early life of a city there is a relatively high rate of turn-over of real estate in relationship to the number of families in the city. As booms and depressions succeed each other, however, we find that each succeeding boom had a tendency to rise to a lower height than the one which preceded it. In matured countries, such as the countries of Europe, real estate activity is far less than it is in younger countries, like the United States and Canada. If our


URBAN REAL ESTATE TRANSFERS
COPYRIGHT ~ ROY WENZLICK & CO. ~ 1944
INDEX 1926 = 100
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
TRANSFERS
LONG TERM TREND
ASSUMED AS NORMAL
1913
1915
1920
1925
1930
1935
1940
1945